

Appl. No. 09/992,008
Draft Supplemental Amdt. dated Sept. 4, 2006
Reply to Office Action of Sept. 6, 2005

AMENDMENTS TO THE SPECIFICATION:

Please add the following new paragraph on page 5 after the description of Figure 4:

Figure 5 is a flowchart of a method for transmitting communication signals in a telephony conference system.

Please replace paragraph [0014] with the following amended paragraph:

[0014] Figure 3 illustrates a representative conferencing system of the present invention. Further, Figure 5 illustrates steps of a method for transmitting communication signals in a telephony conference system of the present invention.

The conferencing system contains a number of conferencing nodes 12 identified by their respective group numbers group 1 through group n. Each node 12 is capable of providing conferencing support to multiple participants or users 14 that are connected to the node 12 by separate communication channels 15. Communication between the multiple nodes 12 is accomplished with a TDM bus 11 (S41).

Please replace paragraph [0015] with the following amended paragraph:

[0015] Figure 4 illustrates a representative structure of a conferencing node 12 in greater detail. A number, n, of separate participants or users 14 are connected to

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this node 12j by communication channels 15 (S42). In an exemplary embodiment of the invention, node 12j is comprised of a DSP that is capable of supporting ten communication channels 15, each DSP may provide communication to one or more participants. In the exemplary embodiment, a power measuring module 16 of the DSP, having ten power measurement devices 17, measures the power S43 of the signal received on each communication channel 15 during some portion of the frame period, T. In a preferred embodiment, the power measurements are periodically obtained during each 0.5 msec frame period. The power measuring module 16 could have more or less than ten separate devices 17 provided that the device was able to measure each individual channel.

Please replace paragraph [0016] with the following amended paragraph:

[0016] The measured power information from each of the power measurement modules 17 is provided to a processor 20. The present invention recognizes that the power level and signal from the individual participants may require signal processing, such as commonly applied to remove distortion or hystorisis. The reference to power level includes signal processing. Processor 20 compares all of the power levels of each of the users 15 provided to processor 20 from module 16 that were measured during frame period T and identifies the three signals having the greatest power level. Although the preferred embodiment of the invention identifies the three strongest signals S44, a different number of the strongest signals may be identified depending

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upon the specific implementation of the present invention. The three strongest signals will identify the active speakers for the next sequential frame period. All signals other than the three strongest signals will be muted by the gain module 18 in the next sequential frame period. This information will not be placed on the conference TDM bus 11, so that the conference listeners, including those in the current node, will not hear these signals.

Please replace paragraph [0017] with the following amended paragraph:

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[0017] Processor 20 also receives measured power information pertaining to other groups of conference participants S44 that are connected to other conference nodes of the system. This information is provided S45 to processor 20 through the bus lines 30 connecting it to a demultiplexer 29. The strength of signals from other nodes is used to compare S46 with the strength measurements of the signals from the node 12j to determine which if any of the signals from the participants connected to node 12j will be transmitted to the system bus 11.

Please replace paragraph [0020] with the following amended paragraph:

[0020] Combiner 21 combines the gain-modified participant signals to generate a sum 26 of the combined signals S47 that may be expressed by the equation:
Combiner 21 combines the gain-modified participant signals to generate a sum 26 of the combined signals S47 that may be expressed by the equation:

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$$GR_j = \sum_{i=1}^N GR_{j,i} = \sum_{i=1}^N g_{ni} \cdot S_{ni,i}$$

Please replace paragraph [0022] with the following amended paragraph:

[0022] With the same .5ms frame size and the same sampling rate, a data frame for the TDM information conveyed by the TDM bus 11 of the present invention need only contain only six time slots for a system with thirty participants distributed among three groups with ten participants per group. Each group or node in the system conveys S48 its information interleaved with the other groups. Each time slot preferably contains eight bytes of information. Four data bytes are dedicated to conveying the four discrete sample sums 26, three data bytes convey the power information for the three strongest signals measured by the j^{th} node 12, and one data byte conveys a synchronization byte.